



22 August 2019

Flyers Creek Wind Farm Mod 4 (SSD 08_0252)

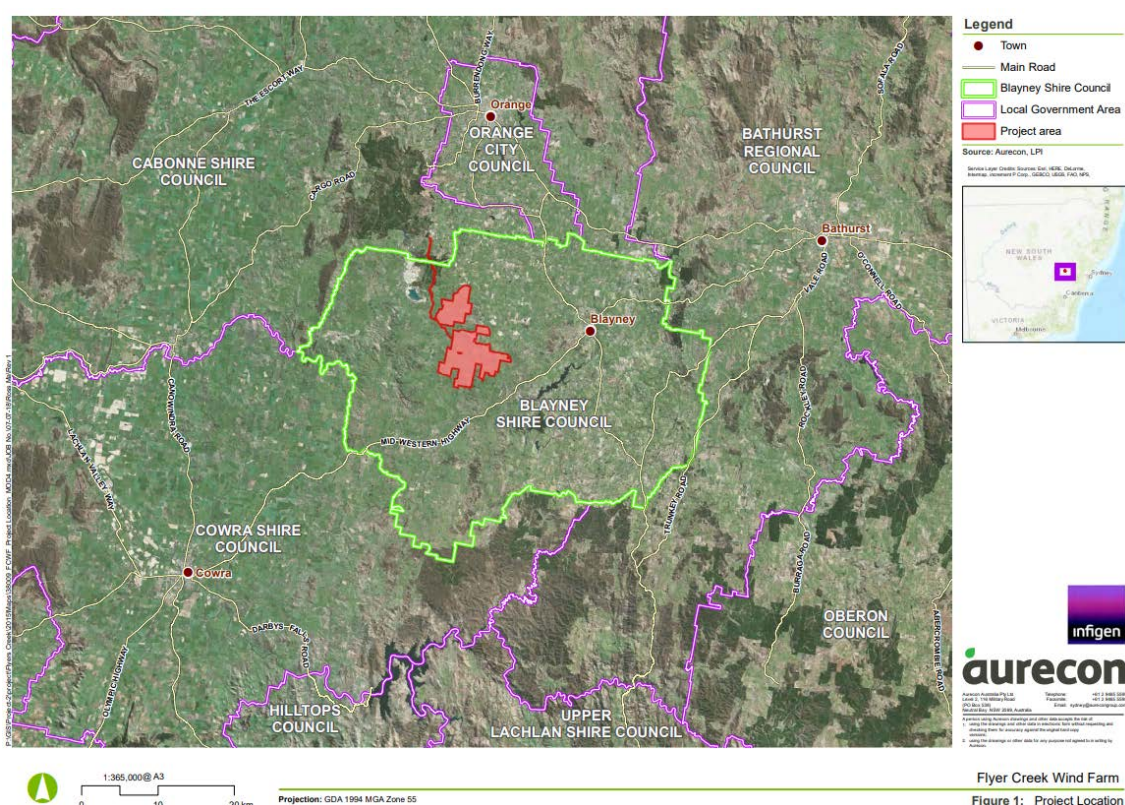
1. INTRODUCTION

1. On 17 June 2019, the NSW Independent Planning Commission (**Commission**) received from the NSW Department of Planning, Industry and Environment (**Department**) a State significant development modification application (SSD 08_0252) (**Application**) from Flyers Creek Wind Farm Pty Ltd (**Applicant**) seeking to modify the existing project approval (**Existing Approval**) for the Flyers Creek Wind Farm (**Project**) under section 4.55(2) of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**).
2. The Project is a transitional Part 3A project under clause 6 of Schedule 2 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017* (**Transitional Regulation**). The Project was transitioned to State significant development (SSD) by order, which was published in the NSW Government Gazette on 6 July 2018.
3. The Commission is the consent authority in respect of the Application under section 4.5(a) of the EP&A Act and clause 8A of the *State Environmental Planning Policy (State and Regional Development) 2011* (**SEPP SRD**). This is because:
 - the Application constitutes an application to modify a development consent for SSD; and
 - the Department received more than 25 submissions from the public objecting to the Application.
4. Professor Mary O'Kane AC, Chair of the Commission, nominated Alan Coutts (Chair), Professor Alice Clark, and Professor Chris Fell AM to constitute the Commission determining the Application.

1.1 Site and locality

5. The Department's Assessment Report (**Department's AR**), dated 14 June 2019, stated that the Flyers Creek Wind Farm (**Project Site**) is located approximately 15 km west of Blayney, in the Central West region of NSW, and covers a large area spanning 11 km from north to south and 10 km east to west. The Project Site is primarily in the Blayney Shire Local Government Area (**LGA**) with a small section of the proposed transmission line in Cabonne LGA. The regional context of the Project Site is demonstrated in Figure 1.
6. The Department's AR stated that the "*topography of the area is characterised by undulating rolling hills including steep, densely vegetated ranges and flat, cleared grazing lands. The elevation of the site ranges from above 900m in the north to 700m in the south*". Cadia Gold/Copper mine is located approximately 8 km to the northwest of the Project Site. Apart from the mine, the Project Site and surrounds are predominantly rural, used mainly for sheep and cattle grazing, with moderately-sized properties.

Figure 1 - Regional Context of the Project Site



Source: Applicant's Environmental Impact Statement

1.2 Background to the Application

7. The Department's AR stated that the Flyers Creek Wind Farm Project (**MP 08_0252**) was originally approved by the Planning Assessment Commission (**PAC**) on 14 March 2014 (**Original Approval**). The Original Approval included the development of up to 42 turbines and ancillary infrastructure, including a 132 kilovolt (**kV**) transmission line connecting the wind farm with the electricity grid. According to the PAC determination report (**PAC Determination Report**) dated 14 March 2014, the PAC approved the Original Approval and was satisfied that, subject to having appropriate access to the site, the conditions imposed would ensure the Project's impact would be minimised and managed to an acceptable level.
8. The Department's AR stated that the Project has been modified three times since the Original Approval. As referenced in paragraph 1, the Commission considers the Existing Approval to include the Original Approval in 2014 and subsequent changes approved under the Modifications set out in Table 1 below.

Table 1 – Project Background

Project	Description	Determination
Original Approval	- Operation of 42 turbine wind farm - Associated infrastructure - On-site substation 132 kV transmission line on Cadia Mine Site	Approval 14/03/2014
Mod 1	6-month extension to comply with deferred commencement conditions	Approval 13/03/2015

Mod 2	• Removal of transmission line • Removal of conditions B1 and B2 • Revised substation location and access tracks • Minor changes to conditions relating to noise	Approval 14/09/2015
Mod 3	• Removal of Project infrastructure from 3 properties • Relocation of turbines 15 and 3 • Realignment of overhead powerline • Changes to access tracks, cabling and bushfire asset protection zones	Approval 30/11/2017

Sourced from: *The Department's Assessment Report*

1.3 Summary of the Application

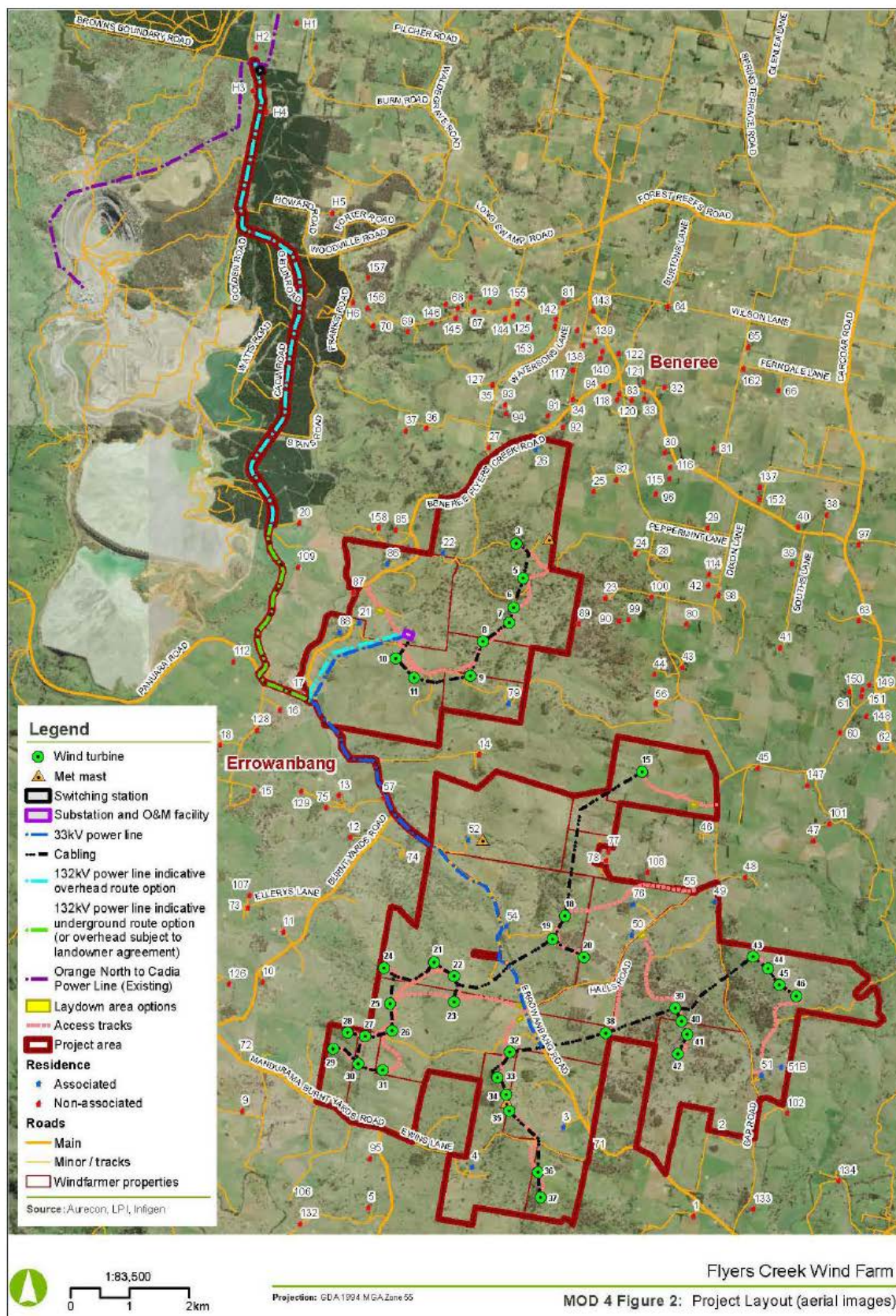
- The Department's AR stated that *"The modifications involve changing the dimensions of the wind turbines, reinstating the 132-kV transmission line to connect the wind farm to the electricity grid, varying the height of the approved wind monitoring masts and updating several conditions"*.
- The Application before the Commission for determination proposes to increase the wind turbine envelope to accommodate newer and more efficient turbine models now available, and include a 132 kV transmission line and switching station to connect the Project to the electricity grid. Specifically, the Applicant is seeking extensions to dimensions of the turbines. The Department's AR lists these changes as *"increasing the length of the blades from 56m to 70m, the maximum tip height of the turbines from 150m to 160m, the footings of each turbine from 144m² to 361m² and the hardstand areas from 2,000m² to 2,090m²"*. The proposed changes to the turbine specifications are set out in Table 2 below.

Table 2 – Approved and Proposed Turbine Specifications

Component	Approved Turbines	Modified Turbines	Change
Number of turbines	38	38	No change
Maximum blade tip height	150 m	160 m	6.7%
Minimum blade tip height	30 m	20 m	33%
Hub height	Up to 100 m	Up to 92 m	-8%
Rotor diameter	112 m	140 m	25%
Blade length	56 m	Up to 70 m	25%
Swept area per turbine	9,847 m ²	15,386 m ²	56%
Nominal power per turbine	3 MW	4.2 MW	40%
Total generation capacity	130 MW	Up to 155 MW	15-20%

Source: *The Department's Assessment Report*

Figure 2 – Proposed Modification Layout



Source: Applicant's Environmental Impact Statement

1.4 Stated need for the Application

11. The Applicant's EIS stated that since the Original Approval, significant advances have occurred in wind turbine technology. The justification for the Project is that allowing for an increase in envelope dimensions for the new wind turbine models would result in a higher generation of electricity per turbine. According to the Applicant's EIS, the increase in total generation capacity of the Project compared to the Existing Approval is expected to be between 15%-20%. The inclusion of the 132 kV transmission line and switching station are critical pieces of infrastructure which will connect the wind farm to the electricity grid.
12. The Department's AR stated that *"Under Clause 3BA (6) of Schedule 2 of the EP&A STOP Regulation, an approval authority must be satisfied that the project to which the approval as modified relates is substantially the same project as the project authorised by the approval when the project was transitioned from Part 3A to SSD"*.
13. In reference to paragraph 12 above, the Department's AR stated that the *"Department is satisfied that this would be the case in this instance, and that the proposal should be characterised as a modification as:*
 - *there would be the same number of turbines*
 - *the layout of the turbines and associated infrastructure would be consistent with the approved layout*
 - *the changes to the dimensions of the turbines are modest*
 - *the addition of the transmission line and associated switching station is essential for the project to proceed, was included in a different form in the Original Approval, and represents a minor addition in relation to the development that is currently authorised by the approval*
 - *the changes to the length of the approved wind monitoring masts are minor; and*
 - *the impacts of the development as modified would be similar to the impacts of the currently approved project"*.
14. The Commission agrees with the Department's findings in paragraph 13 that the Application is substantially the same project as the Original Approval and that it should be characterised as a Modification for the same reasons as the Department.

2. THE DEPARTMENT'S CONSIDERATION OF THE APPLICATION

2.1 Key steps in Department's consideration of the Development Application

15. The Department received the Application in July 2018 and it was placed on exhibition from 16 August 2018 to 29 August 2018.
16. According to the Department's AR, the Department received 74 submissions during the exhibition period. This comprised:
 - 15 submissions from government agencies;
 - 4 from special interest groups; and
 - 55 from the general public

An overview of the submissions received is provided in Table 3 below.

Table 3 - Summary of Submissions

Submitter	Number	Position
Government Agencies	15	
• Blayney Shire Council • Cabonne Council • Environment Protection Authority • Office of Environment and Heritage • Department of Industry – Land & Water • Division of Resources and Geoscience • Roads and Maritime Services • Air-services Australia • Civil Aviation Safety Authority • Federal Department of Defence • Forestry Corp. NSW • Fire & Rescue NSW • Rural Fire Service • Heritage Council of NSW • Essential Energy		Comment
Special Interest Groups	4	
• Flyers Creek Wind Turbine Awareness Group • Hills of Gold Preservation Inc. • Cadia Valley Operations • Environmentally Concerned Citizens of Orange	3 1	Object Support
Community	55	
	54	Object
	1	Support
TOTAL	74	

Source: The Department's Assessment Report

17. The Applicant provided a Response to Submissions (**RtS**), dated 12 October 2018, seeking to address issues raised during the exhibition period. According to the Department's AR, the RtS provided confirmation of the proposed transmission line route and a revised biodiversity assessment report.
18. The Applicant provided an RtS Addendum (**RtS Addendum**), dated 26 November 2018 which provided an addendum to the visual impact assessment (**VIA**) and further information in relation to the reinstated transmission line corridor.

2.2 The Department's Assessment Report

19. The Department's AR stated that *"in assessing the merits of the modification application, and particularly the potential impacts on the local community, the Department carefully considered the potential visual and biodiversity impacts of the proposal"*.
20. In relation to visual impact, the Department's AR concluded that:

"the impacts of the modified project are not significant, and do not warrant additional mitigation at any non-associated residences over and above the visual screening required by the existing project approval for all residences located within 4 km of a turbine. However, the Department has recommended a condition requiring Infigen to mitigate any visual impacts on surrounding non-associated residences prior to constructing the switching station."
21. In relation to biodiversity, the Department's AR concluded that the Application:

“would not significantly increase the biodiversity impacts of the project, subject to the implementation of the proposed management and mitigation measures, the recommended revised conditions limiting clearing of EEC and hollow bearing trees and the requirement for Infigen (to) offset the impacts of the project.”

22. The Department's AR concluded that the project would deliver a range of economic benefits and would also increase the electricity produced by the wind farm, which is consistent with the Commonwealth's *Renewable Energy Target* and the *NSW Climate Change Policy Framework*.
23. The Department's AR concluded that *“the proposed modification has merit and is in the public interest”* and that the *“proposed modification is approvable, subject to the recommended amendments to the existing conditions”*.

3. THE COMMISSION'S MEETINGS AND SITE INSPECTION

24. As part of its determination, the Commission met with the Department, the Applicant and Blayney Shire Council (**Council**). The Commission also held a public meeting and conducted a site inspection and locality tour.

3.1 Meeting with the Department

25. On 8 July 2019, the Commission met with the Department to discuss the Department's AR, the Project and the key issues identified by the Department as part of its assessment. A copy of the transcript and material provided by the Department was made available on the Commission's website on 15 July 2019.

3.2 Meeting with the Applicant

26. On 8 July 2019, the Commission met with the Applicant to discuss the Project. Copies of the transcript and material provided by the Applicant were made available on the Commission's website on 15 July 2019.

3.3 Site Inspection

27. On 22 July 2019, the Commission met with the Applicant and conducted an inspection of the Project Site (**Site Inspection**). The Applicant provided maps that were made available on the Commission's website on 31 July 2019. The Applicant identified the location of key aspects of the Project and key physical features of the landscape. The Commission's Site Inspection notes were made available on the Commission's website on 31 July 2019.
28. The following stops were made as part of the Site Inspection:
 - 1) proposed switching station;
 - 2) proposed 132 kV power line route;
 - 3) proposed 132 kV and 33 kV power line and Viewpoint W14 looking east-north-east from dwelling 17;
 - 4) substation location;
 - 5) turbine 3 and location of northern met mast;
 - 6) viewpoint W3, looking south-south-east to north-west from Platform Road (Browns Creek Rd); and
 - 7) Gap Road, Errowanbang, Halls Road

3.4 Meeting with Blayney Shire Council

29. On 22 July 2019, the Commission met with Council to discuss its views in relation to the Project. A copy of the meeting transcript was made available on the Commission's website on 26 July 2019.

3.5 Public Meeting

30. The Commission held a public meeting at Blayney Shire Community Centre, 41 Church Street, Blayney NSW 2799, on 23 July 2019. A list of the speakers who presented to the Commission was made publicly available on the Commission's website on 19 July 2019. A transcript of the public meeting was made available on the Commission's website on 26 July 2019. Copies of all material tendered at the meeting were also published on the Commission's website on 31 July 2019.
31. Speakers at the public meeting raised the following points:
- the modification will allow the benefits of the Project to be realised;
 - the Project will have a positive economic benefit at a local and State level;
 - the Project will provide local employment opportunities;
 - there is support for renewable energy;
 - the impacts on biodiversity are minimal;
 - the impacts are minimal in comparison to coal fired power stations; and
 - there are no permanent impacts.

3.6 Public Comments

32. An opportunity to lodge any written comments was afforded until seven days following the public meeting. The Commission received a total of 12 written comments about the Application. The following issues were raised in those submissions:
- adverse health effects on residents;
 - inaccuracies relating to the justification of the Project benefits;
 - increased visual impact resulting from increased turbine envelope;
 - impacts of noise/sound/vibration;
 - increase in shadow flicker;
 - visual impact as a result of the new transmission line;
 - impact on heritage vistas and settings;
 - lapsing of consent for Existing Approval and the commencement of works;
 - the Project is not in the public interest;
 - lack of merit assessment;
 - safety of the proposed transmission line; and
 - impacts on property values.

4. THE COMMISSION'S CONSIDERATION

4.1 Material considered by the Commission

33. In this determination, the Commission has carefully considered the following material (the **Material**), including:
- PAC Determination Report, dated 14 March 2014;
 - previous modifications approved as set out in Table 1;
 - the Applicant's EIS dated 27 July 2018 and all associated documents;
 - all submissions made to the Department in respect to the Application during public exhibition, 16 August 2018 – 29 August 2018;
 - the Applicant's RtS and associated documentation, dated 12 October 2018;

- the Applicant's RtS Addendum and associated documentation, dated 26 November 2018;
- the Department's AR, dated 14 June 2019;
- information provided by the Applicant in the meeting with the Commission on 8 July 2019;
- information provided by the Department in the meeting with the Commission on 8 July 2019;
- information provided by the Applicant at the site inspection on 22 July 2019;
- all oral presentations to the Commission at the public meeting held on 23 July 2019 as well as all material tendered at that meeting; and all written comments received by the Commission up until 30 July 2019.

4.2 Additional Considerations

34. The Commission has taken into consideration the following environmental planning instruments (EPI) which apply to the Project Site:
- *State Environmental Planning Policy Infrastructure 2007 (Infrastructure SEPP)*;
 - *State Environmental Planning Policy No. 44 – Koala Habitat Protection (SEPP 44)*;
 - *State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)*;
 - *Blayney Local Environmental Plan 2012 (BLEP2012)*; and
 - *Cabonne Local Environmental Plan 2012 (CLEP2012)*.
35. In determination this Application, the Commission has also considered:
- *NSW Wind Energy Guideline 2016 (Wind Energy Guideline)*;
 - *NSW Wind Energy: Noise Assessment Bulletin 2016 (Noise Criteria)*;
 - *NSW Wind Energy: Visual Assessment Bulletin 2016 (Visual Bulletin)*; and
 - NSW Biodiversity Offset Scheme.

4.3 Visual Impact

Public Comments

36. The Commission received written comments from the public raising concern in relation to the Project and potential visual impacts resulting from:
- a proposed increase to the turbine envelope;
 - an increase in shadow flicker; and
 - the proposed new transmission line.

Applicant's Consideration

37. A Visual Impact Assessment (VIA) prepared by Green Bean Design Pty Ltd dated 27 July 2018 was submitted with the Application. The VIA concluded that the increase in turbine envelope is not considered to be of a magnitude that would significantly increase visual effects and visual impact ratings associated within the Existing Approval.
38. In relation to the visual impacts of the transmissions line, the VIA concluded that *"the proposed reinstatement of the 132 kV transmission line and switching station proposed as part of Mod 4 would be unlikely to have a significant visual impact on surrounding dwelling locations."*
39. A Shadow Flicker Impact Assessment (SFIA) prepared by WSP Australia Pty Limited (WSP) dated 20 July 2018 was submitted with the Application. The SFIA concluded that *"it is unlikely that the shadow flicker impacts resulting from the operation of FCWF (Flyers Creek Wind Farm) will exceed the maximum allowable hours at any receptor. The realistic case scenario assessment indicates that the condition specified in the Planning Approval*

Condition D23 will still be satisfied with the revised turbine dimensions proposed in planning modification 4”.

40. The EIS concluded that the assessment of visual effects associated with the Application can be summarised as low to negligible, and that the implementation of landscaping will provide visual mitigation for a number of dwellings in accordance with the Project conditions.

Department's Consideration

41. The Department's AR stated that its assessment focused on *“the incremental change between the approved project and the proposed modified project only, and whether the turbines as modified would materially change the visual impacts of the approved wind farm”*. The Department, therefore, considered the potential visual impact for both the increased turbine envelope and proposed 132 kV transmission line and switching station.
42. In relation to the increase in visual impact, the Department's AR stated that *“some of the non-associated residences would be more likely to see more blade tips of the modified project, the Department considers that no residences would experience a significant increase in visual impacts from the approved project”*.
43. The Department's AR stated that *“the 160 m turbines would be visible at distances greater than 3.2 km, it considers that the incremental change in impact as a result of the increased turbine dimensions at these residences would be negligible.”* The Department's AR also stated that *“although some of the non-associated residences within 3.2 km would be more likely to see more blade tips of the modified project, the Department considers that no residence would experience a significant increase in visual impacts from the approved project.”*
44. According to the Department's AR, any minor additional visual impacts *“could be sufficiently mitigated through the provision of impact mitigation measures (such as landscaping and visual screening), which could enhance the existing vegetation screening and is available for all residences within 4 km of a proposed turbine under the existing project approval”*.
45. In relation to visual impacts associated with the transmission line and switching station, the Department's AR stated that *“There are 11 non-associated residences located within 1 km of the proposed transmission line, the majority of which are located between Errowanbang Road and the pine plantation to the north. Of these, the owner of one residence (R17) raised concerns regarding the visual impact of the transmission line”*.
46. The Department's AR stated that R17 *“would experience minor incremental visual impacts associated with the 132 kV transmission line which would also be partially screened by the existing Riparian vegetation along Flyers Creek. Views of the overhead section through the forestry plantation would mostly be screened from nearby residences by the pine trees/or existing roadside vegetation.”*
47. In relation to shadow flicker, the Department's AR acknowledged that the Applicant's shadow flicker modelling predicted that *“all non-associated landowners would experience less than 30 hours of shadow flicker per annum”*. The Department noted that the Applicant must comply with existing conditions where shadow flicker from the Project must not exceed 30 hours per annum at any non-associated residence, and where wind turbines are finished with a surface treatment that minimises the potential for glare and reflection.
48. The Department's AR concluded that *“the impacts of the modified project are not significant, and do not warrant additional mitigation at any non-associated residences over and above the visual screening required by the existing project approval for all residences located within 4 km of a turbine”*. The Department has recommended a condition requiring the Applicant to

mitigate any visual impacts on surrounding non-associated residences prior to constructing the switching station.

Commission's Findings

49. The Commission acknowledges the concerns raised by the public, as set out in paragraph 36, in relation to visual impacts. However, the Commission accepts the findings of the Department, as set out in paragraph 43, that the increased turbine dimensions are an incremental change and, that the visual impacts of the Project are not significant. The Commission accepts the Department's statement, as set out in paragraph 48, that the visual impacts of the proposed transmission line and switching station are not significant because residences would only experience minor incremental visual impacts and the proposed transmission line would be partially screened by existing vegetation.
50. The Commission acknowledges the concerns raised by the public, as set out in paragraph 36, in relation to the impacts of shadow flicker. However, the Commission accepts the findings of the Applicant, as set out in paragraph 39, and the Department, as set out in paragraph 47, that the Project will satisfy the conditions under the Existing Approval.
51. The Commission accepts the Department's conclusion, as set out in paragraph 48, that the additional visual impacts of the increased turbine dimensions are not significant. The Commission accepts the conditions recommended by Department, as set out in paragraph 48, which require the Applicant to mitigate any visual impacts at non-associated residences within 4 km of the Project Site.

4.4 Biodiversity Impacts

Government Agency Comments

52. The Office of Environment and Heritage (**OEH**) in its submission to the Department during exhibition, dated 24 August 2018, stated that a review of the Biodiversity Assessment has identified a number of deficiencies that should be addressed in the Biodiversity Development Assessment Report (**BDAR**).
53. OEH in its submission to the Department also stated that a review had been undertaken of the Applicant's Bird and Bat Impact Assessment (**BBIA**) including the Superb Parrot, a vulnerable species known to inhabit an area which includes the Project Site. OEH noted that impacts on bird species will be monitored through a Bird and Bat Adaptive Management Plan (**BBAMP**) and provided further advice in order to identify, monitor and mitigate risks to the Superb Parrots on the Project Site.

Applicant's Consideration

54. A Biodiversity Assessment prepared by NGH Environmental Pty Ltd (**NGH**), dated 24 July 2018, was submitted with the Application. The assessment was undertaken specifically in relation the route associated with the proposed transmission line.
55. According to the EIS, the Biodiversity Assessment concluded that:
 - *"The Reinstated Transmission Line would result in the removal of up to 6.8ha of native vegetation and 1.4ha of planted native vegetation.*
 - *The Reinstated Transmission Line would not have a significant impact on the threatened species or ecological communities in the study area; and*
 - *Mitigation measures have been recommended to avoid or minimise any potential impacts."*

56. The Biodiversity Assessment also stated that *“prior to commencement of construction, the proponent will calculate the biodiversity offset credit liability in accordance with the ‘NSW Biodiversity Offset Policy for Major Projects’”*.
57. In response to the OEH’s request, the Applicant provided two BDAR’s in the RtS, dated 12 October 2018, which assessed the reinstated transmission route, including the alternative options. The BDAR’s set out mitigation measures to reduce impacts on biodiversity and credit requirements in accordance with the NSW Biodiversity Offset Scheme.
58. A BBIA prepared by Brett Lane and Associates Pty Ltd (**Brett Lane**), dated July 2018, was submitted with the Application. The BBIA undertook an assessment of the impacts of the increased maximum turbine envelope on both bird and bats species. The BBIA concluded that *“The change in turbine proposed in planning modification 4 is unlikely to cause significant adverse impacts to the populations of bat species, both threatened and non-threatened. Most bats recorded at the Project Site are common and widespread to south-eastern Australia and the increased risk will impact on mainly the higher-flying species.”*
59. The EIS also stated that the increased impacts from the increased turbine envelope will be able to be appropriately managed under the Bird and Bat Management Program (**BBPM**) required under condition B4 of the Project Approval.

Department’s Consideration

60. The Department’s AR stated that the Applicant has aimed to minimise the biodiversity impacts of the proposed transmission line by locating the proposed infrastructure on land that has mostly been cleared of native vegetation. The Department’s AR notes that *“much of the 45 m wide transmission line easement would not require any native vegetation clearing. Further, the proposed underground section along Panuara Road and Cadia Road would minimise any impacts to roadside vegetation.”*
61. According to the Department’s AR, the BDAR identified that the transmission line would result in clearing up to 53 hectares (**ha**) of vegetation, including 5.6 ha of native vegetation and 47.8 ha of exotic vegetation (pasture and pine plantation). Of the native vegetation, approximately 3.7 ha consists of EEC. The Department has therefore updated the existing conditions of approval to restrict the clearing of EEC for the project to 3.7 ha.
62. The Department’s AR noted that in relation to fauna habitat, *“up to 16 hollow bearing trees would be removed for the transmission line infrastructure. Consequently, the Department has updated the existing conditions of approval to restrict the clearing of hollow bearing trees for the project from 10 to 26, noting however that Infigen would still be required to minimise this clearing as required under the existing conditions of approval.”*
63. In relation to biodiversity offset credits, the Department’s AR stated that the Applicant would be required to calculate the credit liabilities for the Project as *“part of detailed design and to retire these credits as part of the offset package required by the existing conditions of approval.”*
64. In relation to the biodiversity impacts of the turbines, the Department’s AR stated that *“the proposal involves changes to the turbine footings and hardstand areas, which would result in the further disturbance of another hectare”*. The Department’s AR stated that *“The Department has no objection to the additional disturbance associated with the larger turbines, given the low conservation value of the site in general and provided that the impacts of the additional clearing are offset along with the other impacts of the wind farm in accordance with the existing conditions”*. The Department also stated that *“The recommended notice of modification includes updated offset conditions requiring the biodiversity impacts of the whole project to be offset in accordance with the requirements*

under the NSW Biodiversity Offset Scheme”.

65. In relation to bird and bat strike, the Department’s AR stated that *“As the majority of the turbines are located on ridges predominantly void of tree cover, the collision risk assessment concluded that the potential impacts of the proposed modified turbines on birds and bats are not significant, including potential impacts to the Superb Parrot”*. According to the Department’s AR the *“Department and OEH consider that Infigen has provided a suitably robust assessment of the potential risk of the modified project on bird and bat species from blade strike”*.
66. The Department has also updated the timing for preparation of the BBAMP in the updated conditions to be prior to the commencement of operations (not construction) in line with other contemporary wind farm approvals.
67. The Department’s AR concluded that *“the proposed modification would not significantly increase the biodiversity impacts of the project, subject to the implementation of the proposed management and mitigation measures, the recommended revised conditions limiting clearing of EEC and hollow bearing trees and the requirement for Infigen to offset the impacts of the project”*.
68. The Department’s AR also stated that *“as part of the existing conditions of approval, Infigen would be required to prepare and implement an updated Construction Flora and Fauna Management Plan and BBAMP (in consultation with OEH) for the modified project”*. The Department concluded that *“With these measures in place, the Department and OEH consider that the proposed modification would not significantly increase the biodiversity impacts of the project”*.

Commission's Findings

69. The Commission agrees with the findings of the Department, as set out in paragraph 64, that the biodiversity impacts resulting from changes to the wind turbine footings would not be significant. The Commission is of the view that this is acceptable as the additional disturbance area is of low conservation value.
70. The Commission agrees with the Department’s conclusion, as set out in paragraph 67, that biodiversity impacts will not be significantly increased by the Project. The Commission notes that most of the additional vegetation cleared for the transmission line consists of approximately 47.8 ha of exotic vegetation, as set out in paragraph 61.
71. The Commission acknowledges that of the native vegetation proposed to be cleared, approximately 3.7 ha consists of EEC, as referenced in paragraph 61. This Commission acknowledges that this is necessary for the realisation of the Project. The Commission accepts the Department’s updated condition of approval, referenced in paragraph 61, which will limit the clearing of EEC for the Project to 3.7 ha and ensure that there are no additional impacts to EEC that have not been assessed and considered under this Application.
72. The Commission agrees with the conclusion reached by the Department and OEH, as set out in paragraph 65, that the Applicant has provided a suitably robust assessment of the potential risks of the Project to bat and bird species. The Commission accepts the Department’s updated condition, referenced in paragraph 66, as it requires the BBAMP to be prepared prior to the operation of the wind farm because this will ensure that the conditions are in line with other contemporary wind farm approvals.

4.5 Noise Impacts

Public Comments

73. The Commission received written comments regarding the impacts of noise, sound and vibration associated with the Project. Concerns were also raised in relation to adverse health effects of the Project on residents.

Government Agency Comments

74. The NSW Environmental Protection Authority (**EPA**) in its submission to the Department during exhibition, dated 27 August 2018, stated that a review of the Applicant's Noise Impact Assessment (**NIA**) had been undertaken.
75. The EPA stated the following:
- "The predicted noise levels from the operation of the larger, higher-power turbines for Mod 4 are in some cases lower at a given receiver than the predicted noise results from the smaller, lower-power turbines described in Flyers Creek Wind Farm Mod 3."*
- "The proponent states that the larger wind turbines used for Mod 4 have a higher worst-case sound power level. The Mod 3 results predict higher noise levels (particularly for receivers 23, 77, 78 and 95) for 8 m/s wind speeds than those provided in the Mod 4 Noise Assessment".*
76. The EPA concluded that *"the EPA can support the proposal outline in Mod 4, subject to the current approval noise limits being slightly altered to reflect the criteria in Table 3-1 of the Mod 4 Noise Impact Assessment"*.

Applicant's Consideration

77. A NIA prepared by Vipac Engineers and Scientists Limited (**VIPAC**), dated 23 July 2018, was submitted with the Application. The NIA concluded that the increased maximum turbine envelope is likely to generate a slight increase in predicted noise levels at most receivers compared to the predicted noise levels under the Existing Approval. The NIA stated that this could result in a slight exceedance (by less than 1dB) during certain wind speeds between 8m/s to 10m/s at two receivers.
78. In relation to mitigation measures, the NIA stated that *"some noise mitigation measures may need to be applied in the form of turbine micro-siting and turbine wind sector management using lower turbine power modes for one or two turbines during some wind speed conditions, to ensure the applicable noise criteria are met at nearby residences"*.
79. The NIA concluded that *"The noise mitigation measures proposed will be sufficient to achieve compliance with the relevant criteria and that this would be verified by the operational noise monitoring required under Project Approval Condition G9"*.
80. The NIA also considered the impact of the proposed 132 kV transmission line and switching station. The NIA stated that *"transmission line noise (due to corona or Aeolian noise) is not significant or potentially annoying at distances greater than about 50 to 100 metres from the lines"*. The NIA concluded that as the transmission line and switching station are *"not likely to be proposed to be within 50 m of any residences, corona discharge noise or Aeolian noise is not likely to be an issue. The switching station is not likely to cause any significant noise impact at the nearest receivers (located over 250 metres away)"*.

Department's Consideration

81. The Department's AR stated that the Applicant's noise assessment *"demonstrates that the modified project would comply with the relevant noise criteria at all non-associated residences, except for R077 and R078. The noise levels at these residences were predicted to exceed the criterion by less than 1 dB at wind speeds of between 8 m to 12 m per second at the hub height."*
82. In relation to the noise exceedances of the Noise Criteria, as set out in paragraph 81, the Department's AR concluded that *"Given the conservative assumptions used in the noise modelling, both the Department and the EPA are confident that this exceedance is unlikely to occur and that the project would be able to comply with the applicable noise criteria at all associated residences"*. The Department stated that the Applicant *"would be able to avoid any potential exceedances at these residences with sector management, which includes turning off or running turbines at lower power levels during certain wind conditions"*.
83. In relation to noise impacts associated with the transmission line, the Department's AR stated that the *"proposed 132kV overhead transmission line is located over 50 m from any non-associated residences and as a result corona discharge noise or Aeolian noise is unlikely. An assessment of the switching station also concluded that it is unlikely to have any significant noise impact on the nearest receivers."*
84. In relation to the concerns raised in relation to the health impacts of infrasound and low-frequency noise, the Department's AR stated the Department has referred to the advice of the National Health and Medical Research Council (**NHMRC**) set out in the Wind Energy Guideline 2016. The Department stated that the NHMRC has concluded that *"there is no consistent evidence that wind farms cause adverse health outcomes in humans"*. The Department concluded that *"the Department does not consider that the proposed modification (or the project as a whole) would result in any adverse health outcomes for the local community"*.
85. The Department's AR stated that the Department has *"recommended updating the operating noise conditions to incorporate the revised operational noise criteria for the modified project into the conditions of approval, consistent with the EPA's recommendation"*.

Commission's Findings

86. The Commission acknowledges the concerns raised by the public, as set out in paragraph 73. However, the Commission accepts the conclusions of the Department and EPA, as set out in paragraphs 76 and 82, that any potential exceedances of the Noise Criteria at associated residences can be avoided by turning off or running turbines at lower power levels during certain wind conditions. The Commission accepts the recommended conditions by the Department, referenced in paragraph 85, as they are appropriate in ensuring compliance with the Noise Criteria at all associated residences.
87. The Commission accepts the conclusions of the Applicant and Department, as set out in paragraphs 80 and 83, that the proposed overhead transmission line and switching station is unlikely to have any significant noise impacts as corona discharge noise or Aeolian noise is not likely to be an issue due to the distance from nearest receivers.
88. The Commission acknowledges the NHMRC's conclusion that there is no consistent evidence that wind farm cause adverse health outcomes in humans. The Commission accepts the Department's conclusion, as set out in paragraph 84, that the Project would not result in any adverse health outcomes for the local community because any increase in noise output will be incremental and any potential exceedances of the Noise Criteria can be mitigated as set out in paragraph 86.

4.6 Heritage

89. The Commission received one written comment regarding the impacts of the Project on heritage views and vistas.
90. The NSW Heritage Council in its submission to the Department during exhibition, dated 23 August 2018, stated that *"the project does not contain any items listed on the State Heritage Register (SHR) or on the 'Schedule 5 Environmental heritage' of the Local Environment Plans (LEPs) applicable to the project site. Therefore, none of the modification noted above would generate a negative heritage impact."*
91. The Department's AR concluded that the *"Department considers that the proposed modification would not increase the heritage impacts of the project or require any changes to existing approved heritage management regime, and OEH raised no concerns"*.
92. The Commission accepts the conclusion of the NSW Heritage Council, as set out in paragraph 90, and the Department, as set out in paragraph 91, that the Project will not increase the heritage impact of the Project as the Project does not contain any items listed on the SHR or on the 'Schedule 5 Environment Heritage' of the LEP. The Commission finds that the existing conditions of approval are sufficient in managing adverse impacts of the Project on heritage.

4.7 Objects of the EP&A Act and Public Interest

Applicant's Consideration

93. The Applicant's EIS stated that *"the Flyers Creek Wind Farm, as modified by Modification 4 will provide the following primary benefits:*
 - *"In full operation, the Project would generate approximately 430 Gigawatt hours (GWh) of electricity per year - sufficient for the average consumption of approximately 58,000 homes.*
 - *It would assist in replacing the 1,000 megawatt ("MW) shortfall identified by the Australian Energy Market Operator as being required to supplement the lost generation capacity which will result from the planned closure of the Liddell Power Station in 2022.*
 - *It would contribute to the State and Federal Governments' target of providing 33,000 GWh from renewable sources by 2020.*
 - *It would contribute to the NSW Government's target of reducing greenhouse gas emissions by 60% by the year 2050.*
 - *It will contribute to inter-generational equity by reducing greenhouse gas emissions and reducing consumption of finite fossil fuel resources.*
 - *It will provide full time employment for a peak of 140 people during construction and up to 6 to 10 ongoing regional jobs during its operational life.*
 - *It will result in a direct injection of approximately \$1 million per annum to the local community through payments to landholders, permanent staff and community fund contributions."*
94. The Applicant's EIS stated that the Application will:
 - *"enable these important benefits to be realised by reinstating the 132 kv transmission line so as to connect the Project to the electricity grid; and*
 - *increase the total generation capacity of the Project by between 15 to 20% compared to the currently approved Project through the use of more efficient turbine technology than was available when the Project was originally approved."*

Department's Consideration

95. The Department's AR stated that the Department has assessed the merits of the Application in accordance with the relevant requirements of the EP&A Act. The Department stated that *"With the implementation of the amended conditions, the Department considers that the modified project achieves a reasonable balance between maximising the efficiency of the wind resource and minimising the potential impacts on the local community and environment"*.
96. The Department's AR stated that:
- "the proposed modification would allow the benefits of the project to be realised, particularly as it would allow the project to connect to the electricity grid. The project would deliver a range of economic benefits, including up to 100 full time construction jobs and 10 full time operational jobs, with a capital investment of up to \$300 million. Additionally, Infigen would contribute at least \$107,000 a year through a voluntary planning agreement with Blayney Shire Council, of which \$55,000 would contribute to a community enhancement fund."*
97. The Department's AR stated that the Project:
- "would also increase the electricity produced by the wind farm and is consistent with the Commonwealth's Renewable Energy Target and the NSW Climate Change Policy Framework as it would generate approximately 445 GWh of renewable energy per year over its operating life, equivalent to 75,500 homes annually, with estimated emissions savings in the order of 428,000 tonnes CO₂-e per year."*
98. The Department's AR concluded that *"On balance, the Department considers that the proposed modification has merit, and is in the public interest."*

Commission's Findings

99. In considering the public interest merits of the Application, the Commission has had regard to the objects of the EP&A Act.
100. Under section 1.3 of the EP&A Act, the relevant objects applicable to the Project are:
- a) *to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,*
 - b) *to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,*
 - c) *to promote the orderly and economic use and development of land,*
 - e) *to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,*
 - f) *to promote the sustainable management of built and cultural heritage,*
 - g) *promote good design and amenity of the built environment,*
 - h) *promote the proper construction and maintenance of buildings, including the protection of health and safety of their occupants,*
 - i) *to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State, and*
 - j) *to provide increased opportunity for community participation in environmental planning and assessment.*
101. A key relevant object of the EP&A Act to the Application, as outlined in paragraph 100, is the facilitation of Ecologically Sustainable Development (ESD). The Commission notes that section 6(2) of the *Protection of the Environment Administration Act 1991* states that ESD

requires the effective integration of social, economic and environmental considerations in its decision-making, and that ESD can be achieved through the implementation of:

- a) *the precautionary principle;*
- b) *inter-generational equity;*
- c) *conservation of biological diversity and ecological integrity; and*
- d) *improved valuation, pricing and incentive mechanisms.*

102. The Commission has considered representations, advice and comments provided by government agencies and the community. The Commission finds that the Application is generally consistent with the ESD principles, the objects of Act, and is in the public interest because it:

- will assist in reducing GHG emissions and climate change, see paragraphs 93 and 97;
- will promote the social and economic welfare of the community, see paragraphs 93 and 96;
- will not result in a significant impact on the biodiversity values of the land, see paragraphs 69, 70 and 72; and
- achieves a reasonable balance between maximising the use of the wind resource and managing potential impacts on the environment and on surrounding landowners, see paragraphs 93, 94 and 95.

5. HOW THE COMMISSION TOOK COMMUNITY VIEWS INTO ACCOUNT IN MAKING DECISION

103. The views of the community were expressed through public submissions and written comments received (as part of exhibition and as part of the commission's determination process), as well as in oral presentations to the Commission at the public meeting, as discussed and summarised in paragraph 31 and as noted through **section 4**.

104. The Commission carefully considered all of these views as part its decision-making process. The way in which these concerns were taken into account by the Commission is set out in **section 4** above.

6. CONCLUSION: THE COMMISSION'S FINDINGS AND DETERMINATION

105. The Commission has carefully considered the Material before it, including the community's views. The Commission has determined to grant consent to the Application, subject to conditions of consent for the following reasons set out in paragraph 106-110 below.

106. The Commission has considered the visual impacts of the Project. The Commission finds that the increased turbine dimensions are an incremental change and as a result the visual impacts of the Project are not significant. The Commission finds that the visual impacts of the transmission line and switching station are not significant because residences would only experience minor incremental visual impacts and that existing vegetation will assist in providing visual screening. The Commission accepts the conditions recommended by the Department which require the Applicant to mitigate any visual impacts on surrounding non-associated residences prior to constructing the switching station (see paragraphs 49 and 50).

107. The Commission is of the view that the biodiversity impacts resulting from the changes to the wind turbine footings would not be significant as the additional disturbance area is of low conservation value. The Commission finds that the additional vegetation cleared for the transmission line consists of approximately 47.8 ha of pasture and pine plantation, which has a low biodiversity value. The Commission is of the view that the 3.7 ha of EEC required to be cleared is necessary for the realisation of the Project and can be restricted and

managed through the Department's updated condition of approval (see paragraphs 69, 70 and 71).

108. The Commission finds that any potential exceedances of the Noise Criteria at associated residences can be avoided by turning off or running turbines at lower power levels during certain wind conditions. The Commission is of the view that updating the operating noise conditions in the Existing Approval is appropriate as it will ensure compliance with the Noise Criteria at all associated residents (see paragraph 86).
109. The Commission acknowledges the NHMRC's conclusion that there is no consistent evidence that wind farms cause adverse health outcomes in humans. The Commission is of the view that the Project would not result in any adverse health outcomes for the local community (see paragraph 88).
110. The Commission finds that the Project will assist in reducing GHG emissions (approximately 428,000 tonnes per year) and climate change and achieves a reasonable balance between maximising the use of the wind resource and managing potential impacts on the environment and on surrounding landowners. The Commission finds that the Project is consistent with both the Commonwealth's Renewable Energy Target and NSW's Climate Change Policy Framework as it would contribute 445 GWh per annum of renewable energy to the National Electricity Market (see paragraphs 97 and 102).
111. The Commission supports the existing conditions and amendments made to the conditions by the Department, as they have been designed to prevent, minimise and/or offset adverse impacts on the environment and community.
112. The reasons for the Decision are given in this Statement of Reasons for Decision, dated 22 August 2019.



Alan Coutts (Chair)
Member of the Commission



Professor Alice Clark
Member of the Commission



Professor Chris Fell AM
Member of the Commission